Delhi Science Forum- Pusa unit

brings an 'interaction programme'
on
MISCONDUCT IN SCIENCE
date : 27th March '96
time : 5.30 pm
venue : Vasant-Hemant Common Hall

Dr. Dinesh Abrol (NISTADS)
Dr. T.S. Raman (IARI)
Dr. Ramachandran (Economic Times)
participate...

All are invited

Sinecure-grabbing high-priests of science

There should be a code of ethics for scientists which should include misconduct like house and office grabbing, says **R Ramachandran**

Last week a forum of research scholars of the Indian Agricultural Research Institute (IARI) organised a discussion on misconduct in science. Considering that the subject has been the focus of many such fora in the country, the problem is clearly assuming menacing proportions and young scientists are rightly agitated over it.

A recent report of the National Academy of Sciences (NAS) of the USA had defined scientific misconduct as "fabrication, falsification or plagiarism in proposing, performing or reporting research." One of the speakers at the discussion, however, went beyond this and included: reporting of statistically insignificant data, repetitive publication of data, split publications, wrong advice, intentional bias and lack of integrity in selection of data, bias of journal editors, premature publicity of unsubstantiated claims, unfair grading, lack of transparency in CRs, sycophancy, peer silence or inaction over misconduct, trespassing into areas where one has no expertise.

People familiar with the Indian scene will, of course, hasten to add other kinds of misconduct: administrative misconduct by a small group of scientists who invariably serve on various committees of scientific departments in disbursal of project funds, selection of awardees, choice of candidates for various posts in scientific departments. The members of the set are the same who, at various points of time, have also occupied important posts in the science management machinery and have "guided" the development of S&T in the country. At a different level is the mutual back-scratching engaged in by these by giving awards, especially privately instituted ones, to each other. There are also a few amazing instances of the selection committee chairman and the awardee being the same.

Peculiar perhaps to the Indian situation is the penchant for creating sinecures for the retiring bigwigs of science. It would seem that even in the dusk of their career they cannot do without the authority or power of office that they had got so used to in the last years as heads of departments or high-priests of science administration. The simplest, of course, is the creation of emeritus positions. There have been instances where persons with known cases of misconduct have been accorded the status. In one unprecedented case (in Raman Research Institute) a new category of Emeritus Director was invented! Thankfully, however, the department of science and technology, which oversees RRI, has ensured that the Emeritus Director has no executive powers. But the emeritus director continues to stay in the accommodation actually meant for the RRI director.

The more privileged (read powerful) ones among them get special 'advanced centres' set up to accommodate them and often they are also honoured by specially instituted awards. The key to that is to attach the prefix of well known names in science like Raman or Bhatnagar or Bhabha. The prefix Nehru always sells. And as the same handful of scientists control the science academies in the country, the academies' fellows too are (unwitting?) accomplices to such misdeeds.

The case of Bhatnagar Fellowship of the CSIR is the most interesting. The former director of the National Physical Laboratory (NPL) and former CSIR Director General, Dr A P Mitra, instituted this just before he retired. You do not win a prize to guess that he became a Bhatnagar Fellow. But the master stroke was in the perks for a Bhatnagar Fellow which apparently includes similar conveyance and transport as the awardee had in his previous position. So Dr Mitra enjoys a chauffeur-driven car for which NPL spends Rs 1.5 lakh annually! Besides, NPL has also paid for the furnishings at Dr Mitra's house on his demand that he worked from home! But things did not stop here. Bhatnagar Fellows like Dr Mitra, some of whose area of work is far removed from CSIR's agenda, like neurobiology (!), continue to enjoy the huge flats in CSIR Scientists Apartment Complex even while they have their own flats elsewhere. Today, even though the Bhatnagar Fellowship scheme has been discontinued, they are in no mood to vacate the flats. A move like the recent Supreme Court directive to illegal occupants of government accommodation is necessary to prevent such practices prevalent in scientific institutions. The next DG of CSIR had something else worked out for himself: Vikram Sarabhai Professorship of the Jawaharlal Nehru Centre in Bangalore even though his work is as far removed from space sciences as you can get. (The Nehru Centr, currently amidst controversy, is itself Prof C N R Rao's sinecure created when he was chairman of the Science Advisory Council to the PM). Besides he is also an Emeritus CSIR Scientist for which, it is alleged, he has a well-furnished office space at NPL and a Rs 15 lakh workstation bought from NPL funds. Needless to say, he too enjoys a car, driver and a luxurious apartment.

The IARI forum and other similar fora should probably come out with a code of ethics for scientists which, in the Indian context, should include misconduct like house and office grabbing (which can definitely not be dismissed as 'errors of judgement' as the academies are wont to do) and present them to the academies and see how they respond.

Report of 'Economic Times' on discussion 'Misconduct in Science' organised by Delhi Science Forum, Anse unit, on 23rd March '96.

Science: where mediocrity is excellence

IN its report presented to Parliament this year, the Comptroller and Auditor General (CAG) has brought to light serious lapses and shortcomings in the working of certain scientific institutions. It is reported that 29 of the research projects in the National Physical Laboratory (New Delhi) dragged on for over 10 years, while some continued for 34 to 41 years and some between 18 and 25 years. The Indian Agricultural Research Institute (New Delhi) is reported to have closed down as many as 230 research projects in March 1994 without reviewing the output. The Atomic Energy Department has been indicted for the closure of a major uranium mine.

In his presidential address to the Indian Science Congress this year, Prof. U. R. Rao, former chief of the Indian Space Research Organisation (ISRO) said Indian science was both 'Mandalised' and bureaucratised, and there was a proliferation of scientific institutions without adequate funding or accountability, producing mediocre research stuff of no consequence. He suggested restructuring of the country's science policy with adequate investments to meet the challenges of the 21st century.

Prof. S. R. Valluri, former Director of the National Aerospace Laboratory and Aeronautical Development Agency, has said that our scientific institutions have sanctified the system of patronage and helped create unhealthy power centres by including a few scientists to sit in committees empowered to sanction grants, honours and awards and thereby creating a coterie for self-preservation.

Addressing the Indian Science Writers Association last year, the Secretary of the Department of Electronics lamented that mediocrity had crept into Indian science, which was repetitive and imitative and lacked excellence.

The CSIR Review Committee (1988) once commented that science (in the CSIR) had perished while a few scientists had flourished.

This would suggest that there is a general decline in the quality of science and excellence and the Indian scientists have become materialistic. They lack devotion to science. As a result, mediocrity and sycophancy are having an upper hand in the institutions. A recent survey by the National Institute of Science, Technology and Development Studies NISTDS, (New Delhi) shows that more than 80 per cent of the scientists in our universities have a poor image of their profession.

True, some institutions such as the Atomic Energy Commission and ISRO have been successful in exploring new frontiers of research, and have made significant contributions. For instance, the Polar Satellite Launch Vehicles indigenously designed and the export-oriented electronics products. But the overall scientific output in terms of returns from the infrastructure built with enormous investment (the 1995-96 budget allocation for scientific activity was nearly Rs. 5,280 crores) has been far from satisfactory because the country continues to depend largely on foreign knowhow.

One reason is that there has been no accountability and scrutiny in these institutions to assess performance oriented programmes for effectiveness. Money has been spent on a number of big research projects which have not achieved even 50 per cent of the target in 10 years. Also, we have few peaks of excellence both in terms of men and institutions. This is partly because of the uncongenial atmosphere that scientists have created for themselves. The various reports on the unsavoury state of affairs in the CSIR, the ICAR, the DRDO and others bear testimony to this. A critical and unbiased evaluation of our performance has been absent.

The unhealthy environment has led to brain drain, compelling scientists or doctors to leave their homeland to earn a decent living. The NISTDS study says that of the 51 Ph.Ds produced at the molecular biophysics unit of the Indian Institute of Science (Bangalore) between 1974 and 1984, 27 have gone abroad, and of the 44 Ph.Ds produced by its solid state and structural chemistry unit during 1980-89, 32 are in other countries. The situation is the same at the Tata Institute of Fundamental Research (Bombay), the National Chemical Laboratory (Pune), the Indian Institute of Chemical Biology (Calcutta) and the Indian Association for Cultivation of Science (Calcutta), the study says. It was recently reported that many top doctors left the All India Institute of Medical Sciences to join private sector hospitals to earn more money.

It is unfortunate that our scientific establishments have become bureaucratic in their functioning where scientists adopt attitudes similar to those of administrators.

And, some of our big laboratories look like Taj Mahals built to glorify science, but actually to bury it. An example is the multicrore biotechnology laboratory built at the IARI (New Delhi). Indian scientists have developed a five-star culture. The Indian Science Congress session has become an annual ritual where a big 'mela' is organised and a few thousand scientists gather without much deliberation.

The scientists have also been lacking a scientific temper; the spirit of enquiry and drive for truth, which characterise scientific endeavours, have become major casualties. The scientists have been adopting unethical practices in the process of gaining power and position. They have abondoned their scientific outlook and attitude and adopted anti-science postulates as an easy way to quick fame and success. As a result, it has become difficult to inculcate scientific temper in society.

Certain scientists have exploited their political links to get a stranglehold on the scientific establishment to build up their own "empires" and have created a coterie of "yes-men." They have risen to occupy high positions thanks to their godfathers.

Also, an element of scientific dishonesty has crept into Indian science. This malaise, barring some exceptions, pervades the entire scientific and academic community because of greed for bureaucratic power and a comfortable life. The desire for quick results and instant fame has led to the proliferation of frauds and quackery in the scientific community.

Some scientists 'manage' to win awards on a give and take basis. A study by the Indian National Science Documentation Centre found that a handful of top scientists had cornered most of the awards during 1980-93.

Prof. Valluri has said science is important for the economic transformation of the country and, therefore, society cannot leave the scientists alone to do what they please as long as they are spending public money. It is important that the scientific activity in India is de-bureaucratised and made result-oriented to uplift society.

Y. P. Gupta

25.6.96 The Hindu

To revive the quality of research

OF all the afflictions modern research in India is suffering from, the most cancerous is the tendency of plagiarism. Highlighting the highly unethical aspect of plagiarism, James Brander Mathews, the American essayist and critic, wrote: "Every generation has the privilege of standing on the shoulders of the generation that went before, but it has no right to pick the pockets of the first comers."

Plagiarising is worse than pocket-picking, stealing or robbing and deserves the severest penalty. Even revocation or withdrawal of the Ph.D. degree and demotion and dismissal should not be considered too severe for the offence.

Though the Society for Scientific Values, New Delhi, is doing commendable job in cleansing the system and deserves all assistance, the need is for collective and concerted effort at all levels.

The first step is the selection of the right type of research-minded persons as Ph.D. aspirants — a fairly high academic record, 'invincible love of learning,' ready to take research both as a challenge and as a profession, with total commitment to the cause. The system of part-time research must be done away with, and it should be made a whole-time job with reasonable amount of fellowships. Even in-service candidates aspiring to do Ph.D. should go on leave for the required period.

A tough descriptive type written test, conducted on an all-India basis by an independent, autonomous central body, must be a prerequisite for enrolment. The institutes/universities should be allotted the successful candidates from the list according to the students' preference and merit. The institutes/ universities should have a continuously updated panel of guides from which only the nomination for each candidate should be made, taking into account the choice of the topics/subjects.

Under no circumstances the blood relations or even distantly related persons should be picked up as guides. Both the candidate and the guide must swear on a prescribed proforma about the originality of the research work.

To bring about the necessary improvement in the quality/merit of the guides, only persons of high academic attainments with a prescribed number of published works and unimpeachable integrity should be included in the panel.

The periodical assessment of the field/ laboratory/ written work of the candidates should be done once in six months by a standing research committee which should award grades for the work done. Such grades should be the basis for the final grading. For final evaluation of the thesis, at least one of the examiners should be a foreign expert whose opinion should have overriding value.Finally, for revival of the quality of research, some revolutionary measures such as elimination of the existing deadwood without any compassion or consideration and dignified placement of the Ph.Ds produced through this rigorous procedure are essential.

Dr. Mahtab Z. Siddiqui

Fraud and Misconduct in Science

-Dr. *T.S.Raman*

Defining misconduct-The National Academy of Sciences, USA (NAS) in its report " *Responsible science: Ensuring the Integrity of the Research Process"* wants the US Govt. to ask US science agencies to adopt this definition of misconduct: fabrication, **"falsification, or plagiarism in proposing, performing or reporting research".** Facts now suggest that the notion, fraud is found in attempts at replication, is wrong. The scientific method is "no longer self-correcting". It is disservice to perpetuate the idea that the issues of professional behavior are so complex that even the best minds in science cannot deal with them. (Editorial ***Nature 358 (30 April 1992) 730-731)***

Misconduct or fraud is likely to occur in scientific activities like research, teaching, technology development, propagation of science, peer view and other assessments of scientific achievements.

The types of fraud or misconduct include: reporting of statistically insignificant data; manipulation of data; repetitive publication of same data; split publication; wrong advice; intentional bias and lack of integrity in selection; bias of journal editors; premature publicity of unsubstantiated claim; leaking of question papers; unfair grading; exposing students to unnecessary hazards; **assignment of teaching work to incompetent teachers; peer silence or inaction on known misconduct;** trespassing into areas in which one has no expertise.

When to blow the whistle?

"... both govt. departments and commercial organisations need to be equipped themselves with mechanisms by which those who dissent from planned courses of action can say so, and in such a manner that they can be heard by those ultimately responsible with such clarity that the organisation is no doubt of the charges being made against it. The obvious difficulty is that even whistle blowers correctly anticipated misdemeanors by their organisations do not endear themselves to their bosses. The fate of complaints is more often unpopularity. Promotion will rarely be thrust upon them. Yet employers as wells as employees are damaged in these ways. In everyone's interest, there is, therefore, a need for some mechanism by which legitimate professional associations and societies should pay more attention. ... There is no reason why, if organisations will not take sensible steps in this direction, legislation should not be used to compel seemly practice. Whistle blowers who have failed to win satisfaction within their organisation might even be protected if they make their complaints public. (Editorial , ***Nature*** 313 (21 February 1985) 611-612).

Interaction programme on ' Misconduct in Science', 27th March, 1996.

Delhi Science Forum
Pusa unit

Speaker noted that M S Swaminathan had helped in the destruction of 25 acres of scrub forest in the Madras Christian College

- Regular supply of Alumni Association Newsletter.
- Concessional registration for attending various symposia, seminars and other functions arranged by the Association.
- Subsidised rates for all priced publications of the Association.
- Entitlement of availing the services of logistic facilities from the headquarter as well as at its regional chapters.
- Information regarding national and international opportunities for various positions will be made available to members through the placement cell of the Association.
- Eligibility for receiving the 'Best Alumni Award' and other honours and felicitations in recognition of your achievements, accomplishments and distinguished services.

Membership

The Association has two types membership:

1. **Life Membership** : For all past alumni of IARI.
2. **Student Life Membership** : All students enrolled in P.G. School of IARI become Student Life Members of the Association. They automatically become Life Members on leaving the P.G. School after completion of their degrees.

The membership fee for both the categories is Rs. 200/- and is payable in cash/cheque/ Bank draft made in favour of 'IARI Alumni Association' payable at New Delhi. Rs.10/- extra are to be paid for all outstation cheques.

The forms for membership can be obtained from the headquarter or the regional chapters of the Association and should be submitted along with the membership fee to:

The Secretary
IARI Alumni Association
Division of Agricultural Chemicals, I.A.R.I.
New Delhi-110012

For any information kindly contact/correspond to:

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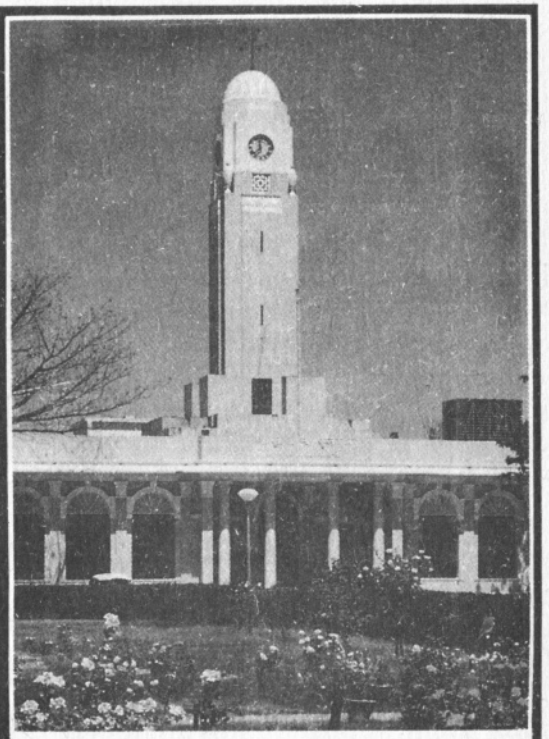

IARI ALUMNI ASSOCIATION

INDIAN AGRICULTURAL RESEARCH INSTITUTE
NEW DELHI-110012 (INDIA)

The **IARI Alumni Association** was formed on 27th January, 1986 and was formally inaugurated during the 'Silver Jubilee Convocation' programme of IARI on 5th February, 1986 by one of the most illustrious alumnus of IARI, Dr. M.S. Swaminathan. The Association had a head start with a generous donation from another distinguished alumnus of IARI, Dr. A.B. Joshi. With this brilliant start the Association has made a significant progress and was formally registered on 2nd December, 1992 (Regn. No. S/23621/1992) as a registered society under the Societies Registration Act, XXI of 1860 with its registered office at Post Graduate School, Indian Agricultural Research Institute, New Delhi.

Objectives

Associations of individuals, sharing common values, are important instruments of promoting and furthering specific causes. Associations, as against individuals, are more effective because of advantages of collective strength, pooled wisdom and a more visible operating forum. IARI Alumni Association is an organization formed and directed by its members as an effective voice of action in all matters concerning the development and the well being of its members as well as its almamater, IARI. The major objectives of IARI Alumni Association are:

- To foster fellow feeling and interaction among the alumni of the Indian Agricultural Research Institute.
- To promote and maintain the overall image of the Institute, as a premier centre of excellence in agricultural research and post graduate education and training.
- To focus attention on pressing problems related to agricultural research, education and extension.
- To provide technical, social and logistic support to its members.
- To felicitate and honour its members for their distinguished services and accomplishments.
- To compile and disseminate latest information regarding the where about and activities of its members for the possible mutual assistance.

Activities

With the help and support of the members of the Association as well as the Post-Graduate School of I.A.R.I., the Alumni Association undertakes the following activities:

- For disseminating the important information on challenges and opportunities related to agriculture as well as news about IARI Alumni Association and its members, a IARI ALUMNI NEWSLETTER is published on regular intervals.
- To congratulate and honour our young members graduating from IARI every year, a reception dinner is organised on the occasion of IARI Convocation.
- Provide a forum for exchange of ideas and brain storming discussion on issues of national agricultural importance by organizing panel discussions, seminars, symposia etc.
- An Alumni Directory giving the present address of all alumni is published at regular intervals to encourage interaction among the fellow alumni.
- The Association organizes special functions for felicitating/honouring its members for their distinguished achievements and services.
- Establishment of state/regional chapters of IARI Alumni Association at key locations in the country and abroad facilitates fellow feeling and local logistic support to its members.
- The executive committee strives to be in continuous touch with the members of the Association for providing all possible assistance and in this endeavour conveys its best wishes for their progress and prosperity by sending greetings on New Year.
- The Association plans to establish a placement service cell which will be an attempt to promote the contact between the prospective employers and young alumni graduating from IARI. It would also provide information on national and international opportunities for various positions to the Alumni.
- To encourage academic excellence, the Association plans to institute a 'BEST ALUMNI AWARD' for newly graduating students of IARI every year.
- The Association at its headquarters and at regional chapters organizes cultural evenings, excursions and other social gatherings to encourage fellow feeling and friendship among the families of its members.

Benefits to a member

A frequently asked question is: what do I get in return to become a member? Considering a large cause, this question sounds very mercenary. But it has an answer though. Have we all not wished it at some time that we knew just the right person to name as a referee? Don't we all know the powers of the "Club tie"? It will be good reminder that Associations are good, practical catalyst for widening the circle of social and professional contacts. Following are the specific benefits available to the members: